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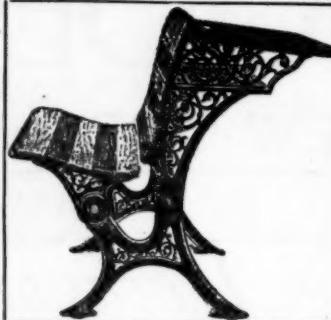
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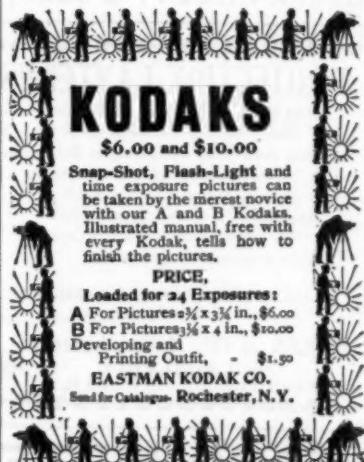
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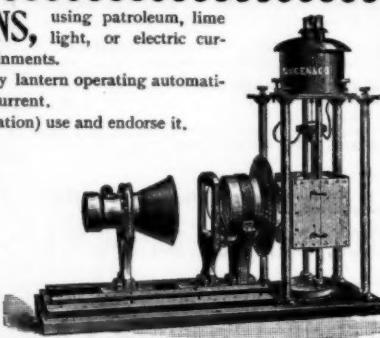
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# THE SCHOOL JOURNAL

A Weekly Journal of Education.

Vol. XLIX.

For the Week Ending July 7.

No. 1

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The business department of THE JOURNAL is on page 19.

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During the summer months, the regular plan of THE JOURNAL is suspended in some of its features. There is no School-Room in this issue. Other variations from our usual program will be noticed. We aim in these numbers to meet the desires of the vacation reader. In a few weeks, teachers will be bending their minds to the work of planning next year's courses. We shall then resume our department of practice, and help all we can. The arrangements for filling our School-Room pages during the coming year have been made with careful regard to the needs of all, and to the demands of educational progress.

We note some anxiety regarding the results of the new education on American spelling. Certain speakers at a recent convention advocated a return to the good old method. One claimed that spelling is becoming a lost art, and stated that the department of instruction of his state frequently receives inquiries about the "scools" or "skules," and a commissioner had asked that a friend of his should be granted a teaching "stifkit." The fun of it is that these bad spellers were trained by "the good old method." Their failures are those of spelling book teaching. Nevertheless, teachers of the new era, see to the spelling of your pupils and prove your methods good by it.

There is a strong tendency among our dreamy brethren to idealize the old-fashioned country school—mainly, we suspect, because it is a memory of their boyhood, whose every experience grows retrospectively much more beautiful than it was when real and present. We have just read a piece of sentimental bosh on this subject that would lead the confiding reader from somewhere else to believe that there were no such things in the country school of old as the alphabet class and the birch-rod. Unfortunately for these preachers of "the good old times," there are many samples of the typical country school of our grandfathers still to be observed within the confines of our proud land, and most people prefer the more modern institution, though it, too, has its faults. There were schools in those days where grandly simple teaching was done, and individuality grew strongly; but the average old-time school was anything but ideal.

Teachers misapprehend some of the best rules given for their self-direction. For instance, a young teacher read in a profound pedagogical treatise (which she

thought it her duty to struggle through, though it was too deep for her), that "the educator's first aim must be to awaken the *desire* for learning." She believed this without getting the true sense of the words, and proceeded to make a laborious and wrong application. She talked to her frolicsome youngsters for five minutes every morning on the power of knowledge, the interesting field of higher study upon which they would enter some day if they progressed well in the three Rs (which mainly occupied them at the time); the delight their parents would experience in seeing them become proficient scholars and the duty of every one to get all the knowledge he can so as to do the most good in the world. Most of the children were unaffected by this, turning to the school tasks of each day in the same spirit as before. The most dutiful among them gained a little fresh stimulus at first, but it was not long before the best boy in the class was seen to yawn during the morning talk.

The mistake this teacher made was in *beginning with the abstract* and in offering distant rather than immediate incentives. She should have interpreted the words of the philosopher this way: "The educator's first aim must be to awaken the desire for" *the fact he is about to teach*. Then instead of talking goody-goody talk to the children about the beauty of knowledge she would have endeavored to plan and give each lesson in such a way as to arouse their curiosity before admitting them to the facts; and in the long run the desire for such knowledge would have taken such deep root in their hearts as to make them independent and lifelong students.

"Man should by education be raised into free, conscious obedience to the divine principle that lives within him, and to a free representation of this principle in his life." This he felt could be done only through self-activity, through making the external internal, by perception of his environment; and through making the internal external, by expression of his thought.

The beginnings for these conclusions were made in Fröbel's early childhood, and they gathered strength as the years went on. He studied and thought with increasing earnestness; he studied especially child nature, and gave to the world his great discovery—what Mr. Clark has so often called "the discovery of the child." He found that the self-activity of the child was developed first through the play, as play revealed himself to himself, and was the true activity of the child. Diesterweg said of him, "The man is actually a seer. He looks into the innermost nature of the child as no one else has done."—*Mary Dana Hicks.*

The next issue of THE JOURNAL will contain a carefully prepared index to the volume closing with the Special Summer Number.

## The Training of Teachers.

By A. SIDGWICK, M. A.

It is no longer an open question, whether all school teachers ought to be professionally trained and certified; in every other art or craft, professional training and apprenticeship is a practical or legal necessity. But in the profession which is undeniably one of the greatest difficulty and of the first national importance, the public, over a large part of the field, has no sort of guarantee of the efficiency of the instruments it employs; and whether the teachers have natural aptitude or not, their professional skill has either to be acquired at the expense of the pupil, or never acquired at all. No serious person can deny that this state of things is *prima facie* a flagrant absurdity. And when we assert the necessity of training we are not blind to the limits that must be placed on what is to be expected from it.

That training alone is not enough; that it will not by itself be able to convert a born incompetent into a good teacher; that some of the most valuable qualities of the teacher are neither taught nor teachable—these are truths which we do not only admit, but insist on; though we may suspect that it is not the untrained teacher who makes the best use of them. I will go further, and assert that training, like other forms of knowledge, may be used in too mechanical a way, and may be too highly valued by its possessor, though I do not assent to the inferences sometimes drawn from these statements. For the teacher innocent of training is at least equally liable to the same dangers. It is quite possible to be ignorant of method, and yet conceited; and it certainly is not necessary to be trained in order to be mechanical. But when all these tendencies and limitations are fully recognized it is obvious, from considerations of common sense and experience alike, that everything else being equal, the trained man is better than the untrained. As Dr. Fitch said before the select committee, "a poor teacher is made better, a bad teacher can be made tolerably useful, and even the best is improved." That puts the case in a nutshell; and I do not see what answer there is or can be to it.

I suppose I may assume a general agreement that training, to whatever grade of teaching it is to be applied, will consist of two elements—first, a general education, including, but not confined to, the subjects which the students will have to teach; and, secondly, specific education, both practical and theoretic, in what the Germans call, by the by, the rather terrible name of Pedagogics, but for which I shall prefer to use the easier term Method. It will, perhaps, be simplest and most convenient to take the different branches into which English education naturally falls, and briefly consider them in relation to this definition.

While nobody has ever ventured to suggest that university teachers should be trained before they commence work, it is a fair question to raise, and it has certainly been discussed in private. There is in many quarters a suspicion of the universities—that though they are powerful by reason of their wealth, prestige, and influence in high quarters, yet they are all the while no better than they should be. The teachers in these have no apprenticeship or professional training of any sort. They have difficult subjects and difficult pupils to teach; youths fresh from the class-lists are set to instruct those scarcely younger, in some cases no younger, than themselves; and if we are going to insist on training, why should we not begin at the top?

In my view the principle of training applies here, too, and that university teachers, like others, would be the better for systematic attention to method. It is plain, for instance, that the older and more advanced the student is the more important is the teacher's *matter*, and the less important his *manner*. With the youngest and most ignorant children Method is almost everything; and, though it never becomes indifferent, its relative value visibly decreases as you go up. Again, originality, always most precious in a teacher, in the early stages works best in detail, within the limits of a

general system; in the higher studies, it works best unrestricted.

In the higher secondary schools every one of the teachers is absolutely devoid of professional training. The true point is, in my view, not whether these schools succeed, but whether they might not succeed better; whether, in short, there is not waste. The first of living head masters is certainly Dr. Percival; and on this point let me quote him. He says: "Take an ordinary school, in nine cases out of ten the young man goes down from the university and plunges into work without any definite preparation of any kind; so that he starts with his own recollection of school life as his sole equipment, and with nothing more in the way of pedagogic theory and training; and my experience almost invariably is that there was a great deal of waste." There are 780,000 children receiving intermediate education in about 11,000 schools; of these the public and proprietary schools number not more than 1,000, the remaining 10,000 being in private hands. In all these, the number of teachers who hold any sort of professional diploma is lamentably small. It is one of the most reassuring results of the improved education of women to find how promptly they have perceived the importance of training, and, almost as a body, have thrown their weight into the demand for it.

In spite, then, of the opinion of teachers of all ranks, of every conference meeting, congress, and association; in spite of the experience of every foreign nation, to which I have no space to refer; in spite of strenuous isolated efforts in practice, among which none have been more striking or successful than those of the women; the English secondary teachers, from top to bottom, still suffer from one vital defect, the entire want of systematized professional preparation. Of the two sides of training which we have assumed—knowledge and method—the knowledge is more or less adequately present; the method is, with the rarest exceptions, absent.

In Germany the training course is six years, in both general education and method; and there is a strong movement now to devote the whole of the first four years to general culture, and leave the professional part to the last two.

I cannot better sum up the whole issue than in the excellent words of the department instructions of two years ago—words intended for the primary teachers, but applicable to all of us: The future usefulness of the teacher depends, not only on what he knows and can do, but on what he is—on his tastes, his aims in life, on his general mental cultivation, and on the spirit in which he does his work. Although such qualifications cannot be formulated in a schedule, or made the subject of examination, they are nevertheless indispensable as conditions of all true improvement in national education.

## An Educational Creed.

(In Supt. A. S. Draper's report for 1893, of the schools of Cleveland, the following clear statement of his beliefs on the subject of education is found; it is most admirable.)

I believe that education, all-around and generally diffused, is the only safeguard of the Republic; that to make sure of this end, the American school system has been developed, and that it is the most unique and beneficent educational instrumentality the world has ever known; that it is incomplete unless it begins with the kindergarten and ends with the university; that if any part of this system demands better care than any other, that part is at the bottom rather than at the top.

I believe that no one is fit to teach in the schools who has not the soundness of character and the cultivation of mind to be worthy of admission to the best of American homes; that the teaching service is not competent unless it possesses scholarship broader than the grade or the branches in which it is engaged, and beyond this is specially trained and prepared, and, over and above this, is in touch and hearty sympathy with the highest purposes and aspirations of the Amer-

ican people; and that even then it ceases to be competent when it ceases to be studious and fails to know and take advantage of the world's best thought and latest experience in connection with the administration of the schools.

I believe that it is not the business of the schools to undertake to cram into a child's head all of the facts it will ever be desirable for him to know, but that it is their business to start the powers of his mind into activity so that he will be able to act on his own account and will have the desire to find out things for himself; that it is not the business of the schools to discriminate in favor of either sex or any class, or specialize in favor of any profession or employment, but to train for intellectual power, to the end that the child may become a self-supporting citizen, may feel the dignity of honest labor, either intellectual or manual, may be disposed to earn his living, may choose a respectable vocation suited to his circumstances and within the reach of his gifts, and may pursue it contentedly until ambition and experience shall combine to point out a better one.

I believe that severity and caprice and indirection and secrecy have no place in the management of the schools, but that openness and steadiness and firmness and regularity and kindness should prevail, to the end that the child shall become a good citizen as well as an intelligent one, may grow to honor the truth, to respect authority, to value property, to abide in agreeable relations with his fellows, to know the cost and to give stalwart support to the distinguished institutions of the mighty self-governing republic of which he is a part.

I believe in political parties and in religious denominations, but that the public school system has nothing to do with any of these and that all parties and sects, all associations and individuals are to be prevented, if need be, from putting any of the powers or functions of the public schools to any partisan, or sectarian or selfish end; that the ground upon which the school system stands is common to all, that, without reference to other divisions, all may meet upon it in absolute equality; and that it is the duty of all citizens to keep this ground sacred if they would fortify the republic against the dangers which may encompass all states based upon the principle of universal suffrage and general eligibility to public office.

### Progress in the School-Room.

There is still a large class who decry progress in education. A principal of an important academy, a fine school, used to laugh in a quiet way when the subject of education was discussed. "All I want," he said, "is a man who is thorough and a good disciplinarian." But it was noticed that as time passed he began to prefer normal graduates; he explained it by saying, "They seem to know how to get along better with the boys."

Another was opened in the town; its principal was a man who had studied education and somehow the public became interested in a way and to a degree that they had not been by the old school. The old principal was a wise man; instead of fighting the new order of things he studied it. His remark was, "If there is only this to be learned, I want to know it." A society was formed to discuss educational themes, and he attended regularly. At first he supposed there were new ways of doing things; as time went on he began to see there was a new creed.

It became a matter of remark in the town that the old principal was a changed man; he erected a gymnasium; he secured a kindergarten teacher; blackboards were put in all rooms; drawing, modeling in clay were encouraged; the physical sciences were taught experimentally; he questioned applicants as to their study of education; thoroughness was not the watchword, but interest and industry.

Some said he never would have altered a hair if it had not been for competition, but it was not wholly competition that did it; he had a trained mind and was able to see that the human being could be set on better educational tracks than by his old methods. There

are some who won't see, and cannot be made to see.

A case is in mind of a man who had a good building and a good community and at one time the whole control. He tried to laugh down the kindergarten that was started; his attendance fell off; people said he was behind the times. Finally he went elsewhere, unable to make a living in G—. A new man took the school and put it on a modern basis; one graduated from Oswego, one from the Cook County normal; one who had studied the Prang methods of drawing and modeling was secured. The school rapidly filled up.

In five years the old principal came back and looked on with incredulity and astonishment; he had failed in another place and was willing to be an assistant, but the new principal knew that new wine could not be put in old bottles. This man would vent his spite by saying, "All a humbug." He could not discern the signs of the times.

It may safely be said that the next twenty-five years will see changes still greater; educational methods are in a very crude state indeed. What these changes will be no one can say. It may take fifty years, but the time will come when no one will think of teaching without several years spent in the study of the work. Thoughtful teachers see this and are reading and studying on a subject once wholly neglected. The leading study in the adult world is concerning man himself; this is the study of those who have nothing to gain by it. Running parallel with it is the study of the child; and teachers have every day to give by pursuing it. It is the new interest in the adult in his own species that has secured a corresponding interest in the study of the child.

### Penmanship.

By R. F. ENGLISH.

Neatness and legibility are secured by many methods known to teachers of writing, but too often at the expense of readiness or rapidity. Bookkeepers, who stand at their desks for hours at a time, secretaries, correspondents, librarians, and every student can testify to their struggle for a time and labor-saving method that should make writing a pleasurable exercise rather than the drudgery it too often proves to be.

Much stress has been placed upon position of body, hand, and pen *slope* of writing, and copy-plate imitation at the expense of individuality. These points are all essential, but there are others just as important which seem to have been nearly or quite overlooked. Such are:

I. Comfortable, hygienic position of body, its main support being the spinal column, both feet on the floor.

II. Necessity for occasional change of relative position of body and desk, to prevent weariness during extended exercises.

III. Development of freedom of motion, in connection or simultaneously with the study of the forms of letters, from the very beginning of school life.

IV. Ability to write vertically, sloping or backhand, as one may desire by simply *turning the book or paper to suit the slope*; thus acquiring independence and individuality, which will inevitably follow.

V. Rapid execution based upon all the foregoing principles, and secured by rhythmic and time exercises.

A few words under each heading may not be out of place in this connection. As to the first, most good writing methods and teachers abound in helpful suggestions. In following these the end sought should be comfort and ease, secured by *relaxation of the muscles*, upright attitude so well-balanced that raising both arms at a given signal shall not elevate the shoulders, head slightly poised (not bent towards the written page), arms and hands at right angles, and both feet on the floor.

Under the second heading, change of relative position of desk and body, would it not be wise to teach more than one? There is no sedentary occupation in

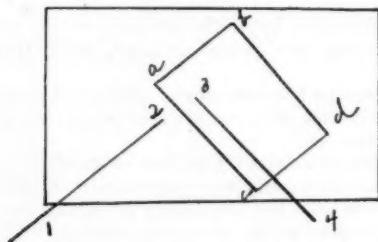
which the body can retain one, unchangeable position for any great length of time without wearying. Children may be taught to take any or all of the positions advocated, front-facing, side or three-quarters facing, and to change from one to the other at a given signal; the only arbitrary requirement being to sit upright, arms and hands relaxed and at right angles to each other, both feet on the floor.

Third : practice-exercises for the development of free motion of arm, hand, and fingers. These may be taken from the Spencerian system and other standard works on penmanship, varied by the teacher to suit her class. Forgetfulness of self and all else save free, uninterrupted motion is desirable, and writing to music is a very effective means of securing this condition. A light, tripping strain played upon the piano will awaken interest in the slowest pupils, and lead them unconsciously into the rhythmic motion so helpful in writing. Meanwhile correct forms of letters may be taught by tracing, at board and on prepared slips or copies furnished by the teacher, always maintaining relaxed muscles and correct position of body.

Closely connected with the second and third points is the fourth, that bone of contention in many of the school journals, and indeed school-rooms of to-day—*Slope!* One of the greatest mistakes in teaching penmanship consists of reminding pupils that their “slope is not right.” It is not necessary to mention slope. Given a correct position of body, pen, and paper, with the requisite preparatory exercises for free movement, slope will come; perhaps not within a hair’s breadth of the angle prescribed by the “powers-that-be.” Still, uniform and regular, and possessing that excellent but rare quality, individuality. How many of us have seen, perhaps used, that patent copy-book cover, so popular because on the inside fold were ruled black lines at just the right angle (?), requiring only to be placed beneath the unwritten page to insure a perfect slope! Are not such devices more than one-half the cause of the cramped, distorted writing positions of the public school children throughout the land? Yet slope alone, it will take care of itself; or better still, teach the children that “vertical,” “sloping,” and “back-hand” writing are secured in one and the same way, the only requirement being to turn the book or paper, still keeping the same relative position of desk, body, and hands.

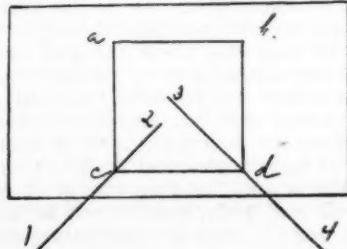
The following diagrams will illustrate these relative positions, the body front facing the desk in each instance :

No. 1



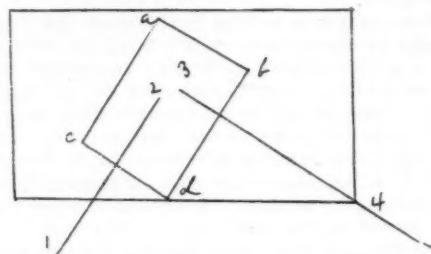
No. 1, POSITION FOR SLOPING WRITING.—Arms, 1, 2, 3, 4 at right angles; pen held between relaxed fingers, thumb about two inches from the point; paper, a, b, c, d, placed obliquely on desk, long edges parallel with right arm.

No. 2.



No. 2, POSITION FOR VERTICAL WRITING. Body, arms and pen the same as before; paper turned so that its edges are parallel with the edges of the desk.

No. 3.



No. 3, POSITION FOR BACK-HAND WRITING OR PRINTING. Body, arms and hands same position as before; paper turned still farther around, being now in a position almost opposite to that in the first diagram.

The same results as to slope may be secured with the body turned side or three-quarters facing the desk, providing the arms are still at right angles, body comfortably erect, and paper changed as above. Untiring, systematic practice of movement exercises in each of these positions will soon develop an easy and pleasurable manner of writing.

The last and one of the most essential points of attainment is rapidity of execution. When the proper conception of the forms of letters has been developed in connection with the foregoing points, exercises for rapid execution should be introduced. They may consist of single letters combined with free arm movements, single words, and groups of words, written to time, that is, the greatest number possible in one minute. The uniformity of slope and regularity of spacing is often surprising in these test exercises.

Thus may the pupils be trained to work well and quickly, taught to change relative position of body and desk when comfort demands it, and enabled to secure that apparent ease and freedom of motion characteristic of a bold, running hand, with muscles well controlled.

### Apostles of Education.

Pestalozzi was essentially a humanitarian; he had a large and feeling heart. His main thought was to enable others to be happier. He had a horror of injustice and oppression and strove to help all who were in distress. It was his desire to help the poor that led him to become a lawyer; further experience led him to turn to farming; the farmers were so ignorant that they could but live in abject poverty, unable to give their children moral and intellectual development. In 1778 he arrived at the belief that the right place to labor for others was in teaching poor and uncared for children, and this led to the educational establishment at Neuhof. In 1798, he opened a house for the orphans occasioned by the dreadful slaughter at Stanza. These enterprises were undertaken without compensation.

The work of Pestalozzi made a profound impression on all Europe; anyone who investigates will be astonished to see how deep the influence was of this hitherto obscure man. Around him gathered a band of men of similar humanitarian ideas; Niederer, Ramsauer, Schmid, DeMuralt, Mieg, De Turc, Barrand, Krusi, and Neef. They were students and helpers. They went from Burgdorf as apostles of the new doctrine and preached it enthusiastically. Germany was the first to embrace it; it became the foundation on which the noble edifice of German education was afterwards built.

Queen Louisa, of Prussia, visited the school. Fichte declared the method the right one, and advocated its general adoption. Seventeen pupils were sent at one time to spend three years in learning Pestalozzi’s methods. The great geographer, Ritter, declared he had watched the growth of “the precious plant”—the school. The English then began to appreciate the new educational methods, and lastly, the French.

The news of Pestalozzi's work came to America, not from Switzerland direct, but from points in Germany and England, where his methods were employed. The first feeling was concerning the debt owed to the children of the best mental and moral development possible. A band of noble men in New England was permeated with these humanitarian ideas, and began to preach them; the chief apostle was Horace Mann; with him were associated the two Alcotts, Samuel J. May, William C. Woodbridge, Warren Colburn, William Russell, Charles Brooks, James C. Carter, Cyrus Pierce, David P. Page, Lowell Mason, Henry Barnard, and many others.

Each of these became centers for the dissemination of the new ideas. (Bear in mind that Pestalozzi had not systematized his discoveries at all; the main underlying principle was a better discharging of a debt owed to the children—the guiding feeling was a humanitarian one.) Especially in the state of New York, David P. Page became a star of the first magnitude. Turning to the ten classes that went out while he was principal of the Albany normal school, these names appear: S. T. Bowen, Elizabeth Hance, J. L. Enos, W. F. Phelps, Gilbert Thayer, S. C. Webb, D. G. Eaton, J. Russell Webb, Anna M. Ostrom, T. H. Bowen, C. T. Canfield, E. Curtice, Orson Jackson, James E. Dexter, George L. Farnham, E. H. Hallock, A. S. Palmer, J. H. Palmer, Louise Ostrom, H. W. Collins, L. B. Carey, J. W. Frisbee, I. B. Poucher, C. R. Abbott, D. W. Blanchard, James Johonnot, Levi Cass, J. A. Hallock, E. P. Waterbury, Frances A. Wood, James Denman.

What a company of noble men and women! This is not made as a complete list; a few names are given of those whose work was so apparently remarkable. "The story of the accomplishments of many of these reads like a fairy-tale," it has been well said. And the conclusion is that education is like religion; those who embrace it must live it, must preach it. It needs preaching to-day as much as it did in those early days; it always will need it.

## Illiteracy—The Remedy.

(This article is spelled in accordance with the "Five Rules for Simplified Spelling," which are accepted by all spelling reformers, viz.: 1. Omit *a* from the digraph *ea* when pronounced as *e* short; as *hed*, *heft*, *bret*, etc. 2. Omit *silent e* after a short vowel; as *hav*, *grv*, *definit*. 3. Write *f* for *ph* in such words as *alfabet*, *filosofy*. 4. When a word ends with a double letter after the regular short sounds of *a*, *e*, *i*, *o*, *u*, omit the last; thus, *shal*, *sel*, *wil*, *dol*, *cuf*, etc. 5. Change *ed* final to *t* when it has the sound of *t*; thus, *blockt*, *cookt*, *dift*, *prest*. Words ending in *ss*, *ce*, and *ge* are excepted from these rules.)

Every year, thousands of emigrants ar landed on our shores, most of whom, it is to be presumed, lern to speak English after a time, but to many of whom the written and printed English remains through life a mystery. To make intelligent, reasoning citizens of either our nativ or foreign population, it is necessary that it should hav the ability not only to read but also to *write* English. The chief hinderance to all persons attaining this ability is our absurd, antiquated, unreasonable, monstrous orthografy. It takes years to master it. A third of school life is given to lerning it, yet there ar few teachers who can correctly spel fifty words taken from a newspaper, and every college professor would feel lost without a dictionary at hand. It is not uncommon for boys and girls of wel-to-do parents who have attended school regularly from the age of six to sixteen, and then gone to college til they wer men and women, to show very incorrect spelling in their letters, and the boy or girl who leaves school at twelve or fourteen, and does not go into some business which requires the daily use of the pen, wil usually be found unable, in a few years, to write a letter which is correctly spelled.

Now, as I hay already pointed out in this magazine, the knowledge that one does not spel correctly has a depressing and retarding influence upon the mental faculties. It prevents that person from writing down thoughts and impressions for personal improvement, as well as from corresponding with friends. The flow of

ideas is continually checkt by doubts as to how certain words should be spelled, and as little writing as possible is done through the fear of the orthografy being critisised by others.

If, then, ten years does not suffice to giv the youth who regularly attends school, perfect facility in spelling, how can a child or foreigner, who has opportunity to go to school but as many months, lern to read, and spel correctly when writing? It is manifestly impossible unless a change is made in the methods of teaching. Trials made during the past thirty years in England, in Boston, Syracuse, St. Louis, and in the Freedmen's Schools at Nashville soon after the war, demonstrated conclusively that children and adults could be taught in the course of three or four months, by means of fonetic print, to read anything within their comprehension. In two months more, transition was made from the fonetic to simple ordinary readers, through the resemblance of the printed words and their connection in the sentence. At this point, that is, when transition was being made to the common print, the work of instruction made a long halt; because it was thought that the child should then begin to lern to spel in the ordinary way; and so from the plain path of fonetic progress, where each word lernd is a guide and help in pronouncing the next, the pupil was led into the bewildering, trackless labyrinth of the common orthografy, and blundered on, no longer depending upon his reason, but upon the teacher's interpretation of what the letters denoted.

The fonetic books used in the experiments I hav mentioned wer printed with an alfabet of forty-four letters, which was known as the "Cincinnati Alfabet." In that, a single letter always represented a certain sound. Consequently many new characters wer used, and the resulting print did not resemble the common sufficiently to be red by a person who understood only the ordinary page. Examination of the following specimen wil show that such a purely fonetic print, with new letters, is not easily decifered; and it wil be seen at once, that a script formd from it could be used as a means of communication between a fonetically traind person, and one who could only read and write in the ordinary way.

### ONE-LETTER, CINCINNATI ALFABET PRINT.

"It mit hav bin wel in oldn rjms  
Tu be plaig wid silent leterz;  
But dqrz tu muq tu lurn des modern tims  
Tu be hamperd wid eni sue futurz.  
Dhen awa wid deset and ljs!  
Awa wid ambigqus mqrks!  
So de sorteest röd tu da bots ov de wjs  
If y'd gladn sr weri hqrtz."

The Filologists, who lead the Spelling Reform Association, hav formulated an alfabet, the use of which results in print like the following:

### FILOGICAL SPELLING.

"It mait hav bin wel in oldn raimz  
Tu bi plēing widh sailent leterz; [taimz]  
But dhär'z tu mōch tu lōrn in dhiz modern  
Tu bi hamperd widh eni such feterz.  
Dhen awe widh disēt and laiz!  
Qwe widh ambigyuus mārks!  
Sho dhi shōrtest röd tu dhi thēts ov dhi waiz  
If yū'd gladn our wiri härtz.

This print, which givs to the vowel letters the sounds they represent in other European languages than the English, is scarcely more easily red and written than a purely fonetic, one-letter method.

But another plan has been thought out and carefully tried in various publications, which is known as the "Anglo-American." It is not so strictly fonetic as a single-letter alfabet; for digrafs, diacritically markt letters, and even equivalent letters ar employd under rule, for the purpose of bringing the script and print into great similarity of appearance with the common, the basis of the Anglo-American alfabet is the use of each single Roman letter, or combination of letters, to

express the most common sound for which it is employed in ordinary English, without regard to the sounds of the same letters in foreign languages. The five vowel letters, *a, e, i, o, u*, when unmarked, represent the short vowel sounds heard in *nat, net, nit, not, nut*; the other vowel sounds, mostly long, are denoted by marked letters, as in a dictionary, or the "lengthener" *e* is added, as is seen in the following example:

## ANGLO-AMERICAN PRINT.

It mit hav bin wel in ölden rimez  
To be playing with silent leterz,  
But thare'z too much tu lern theze modern timez  
Tu be hamperd with eny such feterz.  
Then away with deseet and liez;  
Away with ambigius marks;  
Shö the shortest röd tu the thauts ov the wize,  
If yoo'd gladen our weery harts.

The labor of teaching children and illiterates with this Anglo-American print is somewhat greater than is needed with an alfabet in which one certain letter is the only representative of a certain sound; tho the time of learning will not be very greatly extended, and more than an equivalent is gained in facility of transition to the common print. But the crowning excellence of this method lies in the fact that there will be no necessity at all for the pupil to learn to spell in the ordinary manner; because the script of the Anglo-American print is so plain that any ordinary reader can interpret without difficulty. So that writing as well as reading, both in phonetic and common books, will, within one school year of ten months, be at the command of any intelligent child or adult. Of course, this year of purely phonetic training in the arts of reading and writing can be supplemented by the study of ordinary spelling, to the extent permitted by the subsequent time at the pupil's disposal; but it will not be necessary, either for private use or for carrying on correspondence. Indeed, so soon as a full set of elementary books in the new print is published if the pupil's school days are limited, it will be far more advantageous to teach the elements of arithmetic, geography, and history from those phonetically printed books, than to spend the additional time in a fruitless endeavor to master the present mode of spelling.

The plan of instruction thus roughly sketched, will, in the opinion of the writer, go far to solve the problem of universal education.

—Eliza B. Burnz, in *The Twentieth Century*.



## Mind Evaluation for Teaching Purposes.

Andrew Thomas Smith, in a thesis for the doctorate in pedagogy, taken at the University School of Pedagogy, N. Y., gives a carefully prepared argument for the determining by teachers of the power of their pupils' minds as a basis of teaching effort, and, at the close, offers the following plan and directions:

## REMARKS EXPLANATORY OF CHART.

It is believed that the appended chart possesses enough matter for observation to enable teachers who are infused with the spirit it would foster to take note of such defects or merits in pupils as may come under their notice.

Effort has been made to cover the physical, intellectual, emotional, and volitional elements in human nature with a degree of exactness commensurate with the demands made upon practical teachers for such knowledge; but excessive analysis has been avoided, in the belief that a mass of minutiae would defeat the very end in view—to give to teachers a working knowledge of each child in his entirety, and still to preserve his unity.

The commonly accepted terminology has been employed wherever possible, subject, however, to the higher aim of presenting definite thought in the ab-

sence of fossilized but empty words. Hence many traditional terms of psychologists do not appear, while their thoughts do; and some terms, not yet become widely popular, have been introduced because they are thought to contain ideas in need of much emphasis.

The primary purpose of the chart is to enable teachers to get such a definite knowledge of the present condition and needs of their pupils as a merchant has of his goods after having taken "account of stock."

It is not intended that the order of parts here presented shall be taken as a necessary sequence. Some points can be filled in at once; others after direct test; while still others will demand repeated observations. Indeed, record after but a single observation of such parts as "Disposition," "Imagination," "Attention," etc., might well have its trustworthiness doubted. Some things such as "Health," "Eye-mindedness," etc., should be sought out at once.

It is believed that during the first two weeks—a shorter time if possible, longer if necessary—a teacher's time cannot be more profitably spent than in finding out what is here indicated. Let it be remembered, however, that all the matter, not requiring direct test, is to be collected while children are engaged in the regular exercises of the school. Bending one's best energies at the outset to find out just what a child is, will facilitate all one's later teaching.

Records made at the beginning and near the end of the term will enable the teacher to measure the improvement of the child, and this, together with his acquisitions, will offer a reasonable basis for promotion.

The record of one grade at the end of the term must not be granted to the teacher above as her record for the beginning. Each teacher must make a personal estimate of the pupils at the beginning, and then she stands on independent footing both for successful work and for measuring progress.

Experience has proved that by careful practice great facility is acquired in accurately estimating pupils; hence the time required at the outset is soon very greatly reduced, and the devices, absolutely imperative at the beginning, are speedily simplified.

In directions for use of chart, words have been employed and questions asked in such a way as to enable teachers not in possession of a theoretical knowledge of psychology to make successful use of it. Believing such practical psychology of itself more valuable than the study of a book alone, the writer still urges upon teachers the importance of both. They are complements of each other, and in this, as in every other activity, really artistic work can be done only in obedience to well-founded theory, and will grow explicit in proportion as such theory is comprehended, both book and doings of the child depending for their interpretation upon one's own introspection.

The chart is not intended to solve the problem of an absolute record of mental power, capable of interpretation throughout all time, nor to fix a universal standard by which any grade name, as First Grammar, Second Grammar, etc., may be understood, but to enable each teacher to make definite comparison of the pupils found in any one grade.

## DIRECTIONS FOR USE OF CHART.

NAME.—Record name in full.

AGE.—Years and months are necessary for comparison.

WEIGHT.—In many schools the teacher will need to direct pupils to be weighed at some convenient place and to report.

STATURE.—This each teacher can ascertain with little trouble during the first few days of school.

GRADE.—Use the terms employed in your school. Grade has no reference to "mark" in class work.

## TEMPERAMENT.

1. *Excitable or Calm?*—Is he easily excited, or stirred and confused; or is he quiet and self-possessed, even amid efforts to disturb or provoke?

2. *Energetic or Dull?*—Without, perhaps, losing his

balance of mind as he would if excitable, is he strongly active, usually "on the go," and ever ready to play; or is he slow and of easy disposition with but little inclination to play?

#### NATIONALITY.

1. *Father*.—This is not a question of birthplace but one of parentage. To what nation does the father belong by birth? Get this report from home.

2. *Mother*.—Treat the same as father.

#### HEALTH.

1. *General State of*.—Is it "excellent," "good," or "poor"? If "fluctuating" be sure to note the fact.

2. *Ever Sick from Over study*?—For this, as well as the other divisions of health, supplement the child's knowledge by a report from the parents.

3. *Any Bodily Defects to Affect Study*?—Does the child have any defects of eye or ear, any hip or spinal trouble, habitual constipation, heart trouble, etc.? Be careful in testing eyes and ears to test not only the two used together, but test them singly. (Any bodily defects discovered should be reported to parents at once.)

#### DISPOSITION.

1. *Sensitive or Indifferent*?—This has to do with pleasures or pains that concern himself alone. How does he rank with his fellows in respect to stimulus which attacks his body? Does he endure, without apparent suffering, what would be painful to another; or is he sensitive in this particular? When placed in circumstances (not bodily) highly pleasurable, or somewhat painful to another, does he show strong feeling of either kind; or is he indifferent?

2. *Careful or Careless*?—This may be indicated by dress, recitations, written work, etc.

3. *Hopeful or Sad*?—Is he inclined to look on the bright side of things and see good, whenever possible, in life; or is he easily disheartened and given to brooding over circumstances?

4. *Sympathetic or Unsympathetic*?—This has to do with his feelings in relation to others. Does he enjoy giving pain to another human being or to animals; or does he strive to give pleasure to them? If they are suffering does he suffer with them; or does he appear not to notice such suffering? If they are in pleasure does he rejoice?

5. *Kind or Unkind*?—When others are not manifesting strong feeling of any kind, does he still treat them with consideration and care; or will he take mean advantages of them and otherwise treat them unkindly? His conversation and recitations will indicate much.

6. *Leader or Follower*?—This may be noted in his play or other dealings with fellow-pupils.

7. *Arrogant or Respectful*?—Does he show a proud and domineering spirit; or is he respectful to equals and to superiors?

8. *Honest or Dishonest*?—In this note especially the little things in recitation, play, etc., and do not wait for matters of grave moral concern.

#### PERCEPTION.

##### 1. Color.

(a) *Quick or Slow*?—Does he readily select colors you may present to him; or does he show doubt by hesitating and wondering?

(b) *Accurate or Inaccurate*?—After he has learned a color, does he regularly get that color correct; or is he liable to mistakes and apparently subject to the mood he may be in?

2. *Sound*.—The same subdivisions may be made here that were made in Color, and the same questions will apply.

3. *Form (Active)*.—These are the same subdivisions that appear in Color, and the (Active) has to do with his perception of Form by means of sight and active touch combined.

(*Passive*).—The same subdivisions as above, but the (*Passive*) has to do with his perception of form by means of the eye unaided. (This grows in importance when we think how much in practice the eye through its "acquired perceptions" is substituted for the other senses.)

#### 4. Sense Impressions.

(a) *Numerous or Few*?—This has to do with colors, forms, etc., combined. Bring before him a great variety of things, and, after directing his observation to them for a short time, remove them and have him reproduce what has been observed. Note whether he confines his description to few things with minuteness or to many things.

(b) *Orderly or Disorderly*?—Has he simply noted a little here and a little there; or has his observation followed some regular sequence?

(c) *Spatial or Logical*?—If a sequence is observed, is it one of space-relations or is it one of logical dependence? That is, does he name things in succession; or does he name things as they depend upon each other—a thing and its parts, or things agreeing in color, in form, etc.? In testing for sense impressions use definite forms constructed by arrangement of lines, or plain things not containing much suggestion for the imagination.

#### 5. APPREHENSION.

(a) *Complete or Partial*?—Does he attach finished meanings to things presented to him; or is he simply impressed with the fact that it is "a thing" showing little tendency to determine what?

(b) *Inference Fair or Bold*?—Does he note what things really are; or is he likely to make bold and hasty inferences suggested by what he observes and indicated by "I suppose," "I would take it to be," or "It seems"? Does he tell only what is observed (fair); or does he tell, as a part of perception, what he thinks about what has really been observed?

(In testing for Apprehension use pictures of human forms or of landscapes, or other things that will be suggestive to his imagination.)

6. *Eye-minded or Ear-minded*?—Tests may be made for this by using figures, letters, words, nonsense syllables, Roman numerals, sentences, etc. These may be arranged in sets for each sense with an ascending scale of difficulty. Presenting them one at a time for as long a time as it takes to say to one's self what is on the card, withdraw and have the child or class by writing reproduce as much as possible. (In the child's writing require him to cover up each time all that has been written.) Note the number of errors for each sense. Again, a series too long to be remembered at one presentation may be taken and note made of the number of times such a series must be presented to each sense in order to be learned. (In making these tests the different varieties of test should be scattered throughout the series, thus relieving each sense as much as possible.)

7. *Motor Aid*.—This may be found by testing his ability to reproduce groups of forms presented to him (1) ready made (2); having him observe while the teacher makes it, say, on the board (3); having him accompany the teacher's making with his own motion. Compare errors. Such motion need not be confined to the hands, but account may be taken of the motion in saying sounds he is expected to reproduce in some order. Mark the aid offered "great," "small," or "indifferent."

#### MEMORY.

##### 1. Of Words.

(a) *Quick or Slow*?—Does he commit a selection, either in prose or in verse with readiness, or is verbatim memorizing a slow and difficult process? Does he readily "pick up" words used by others, but not intentionally taught to him?

(b) *Accurate or Inaccurate*?—When a selection has been properly committed to memory, does he retain it just as learned; or is he likely to substitute words, even such as often destroy the sense? Or, if it is not all held, does he simply leave a blank?

(c) *Local or Auditory*?—When committing any selection can he learn it best by studying it silently; or by saying it aloud or even having it read by another? Does he remember it by seeing how it looks on the page; or by recalling the way it sounds? (For finding the answer to this last the teacher will need great caution, and may be compelled to ask the child.)

## Editorial Notes.

At a reception given by the Manual Training and Kindergarten classes of the New York Normal college on Wednesday, June 20, an exhibit was made of the series of models in cardboard sloyd published by Mr. Kenyon during the past year in THE SCHOOL JOURNAL. The exercises had been well worked up by the pupils, and presented a remarkably neat and pretty appearance.

Lord Salisbury, in an address before the University Extension Congress a few days ago compared his graduating period, when the main object was the teaching of the classics and mathematics, with the present wider and genuine system of education. He urged that educational work should more largely embrace the industrial class. He has the right idea. Education extension is what the world needs.

The people of Indianola, Miss., are excited over the discovery of a gang of robbers, composed largely of the negro school teachers of the county. Persons to whom the education of children is entrusted turning robbers? Horrible!

Supt. W. N. Hailmann, well known to all American teachers, has taken a step that will greatly enhance the usefulness of the Indian schools of which he is the executive head. He has announced that summer institutes will be held in the interest of Indian education, as follows: At Chilocco, Oklahoma, from July 2 to 7; at Santa Fé, New Mexico, from July 9 to 14; at Salem, Ore., from July 23 to 28; at Helena, Mont., from July 31 to August 4; at St. Paul, Minn., from August 13 to 18. It is hoped that these meetings will do much to help Indian school work. The officers intrusted with this work will give full and specific instructions concerning the proposed changes in courses of study and work, in methods of teaching and in the organization and discipline of the schools. They are instructed to demand hereafter reasonable efficiency in the work of teachers and other employes on the basis of the work thus brought before the teachers and others, and to hold school officers and teachers strictly responsible for carrying out with a reasonable degree of success the plans of the Indian office. Mr. Heinemann who is an occasional contributor to THE JOURNAL and other progressive instructors will avail themselves of these conferences to expound the new education. We wish Supt. Hailmann and his assistants success in this important work.

The exhibit of the schools of East Orange, N. J., attracted much attention. Supt. Reinhart, of Paterson, N. J., was among the visitors and was so well pleased with its high educational value that he urged his teachers to spend a day in examining it. Several other superintendents were there and congratulated the schools of East Orange on the splendid progress they have made under the administration of Supt. Vernon L. Davey.

The closing, last month, of Naples university on account of the riotous conduct of the students has been followed by a violent agitation which culminated in a hot fight between the students and troops this recently. The students had attempted to force open the university building and had driven off the police who tried to subdue them. They refused to disperse when three companies of infantry came up on the double quick. Several stones were thrown at the troops, and the leaders of the students defied them to charge. Eventually two of the three companies advanced with fixed bayonets. The students stood their ground, fighting desperately with clubs and stones. After many on both sides had been wounded, the military arrested the leaders of the mob and scattered the others.

There evidently is something wrong in European university life. The newspapers in the past months have brought many accounts of similar occurrences.

This week the Music Teachers' National Association is in session in Saratoga. There will be morning lessons at which essays on live and interesting topics will be read by eminent musicians. Afternoons and evenings will be devoted to musical exercises—vocal and instrumental.

### Leading Events of the Week.

Many lives lost by the sinking of the tug *J. D. Nichols* near Sandy Hook.—The Saengerfest concert attended by ten thousand persons at the Madison Square garden, New York.—President Cleveland says that the administration proposes to keep the quality of United States money equal to the best; no fears need be entertained for the treasury.—Most of the lines of railroad running into Chicago tied up by the boycotting of the Pullman coaches.—The Lexow legislative committee, that has been investigating the police department of New York city, adjourned until Sep. 10.—President Carnot's funeral attended by immense crowds; elaborate decorations along the route of the parade; impressive services in the cathedral of Notre Dame; orations by Premier Dupuy and others.

## Editorial Correspondence.

### FROM OVER THE SEA.

I shall attempt merely to set down observations that may have some practical value to readers. The *Teutonic* left New York on Wednesday and on the following Wednesday I was walking the streets of Liverpool. The ocean was remarkably level all the time; few appeared to feel discomfort. The Stork hotel charges one dollar per night for two, and is central. From Liverpool to Chester (old Roman name *Castra*, a camp), it is but a short journey; in taking it one gets a glimpse of English country that repeats itself over and over. It is one universal green with noble trees; here and there are ploughed fields, but they are few in number. Luxuriant grass is everywhere.

Chester is the capital of Cheshire and has nearly 40,000 people; it is visited because it retains so well its old medieval character. Westminster hotel, near the depot, is very comfortable and reasonable in price; \$1.50 per day for a room for two. Here, as in Liverpool, the "bookkeeper" is a woman; the hotel clerk, as known to Americans, is not seen in England. I may add that the bar-tender is also a woman; both held these places in ancient times and that is a good reason in this country. Chester still maintains walls built on those it had in Roman times, and a walk on them gives an American a sensation he cannot obtain in his own land, save possibly in looking at the old gates in St. Augustine. At one angle is a tower where Charles I. witnessed the defeat of his followers in 1645; from this point you look down into the Dee river that skirted one side of the camp; the old moat on another side has become a canal. The gates by which access to the old city was gained have been removed and you enter under an archway named "Eastgate."

The interesting feature to me was the ancient cathedral. It is claimed that Elfreda, a daughter of King Alfred, brought the remains of a saint to a convent here in 875, and this gave it a reputation which could be surpassed by nothing else in those old days; an extensive abbey was built in Norman times and parts of this are pointed out; on this a gothic structure was erected about 1200, and this remains, with additions. The evident age of the structure is most impressive. You walk over flagstones and help obliterate the names of the dead underneath. You feel that a multitude of people have lived and died, and succeeding them others have perpetually come and gone. The cathedral causes one to feel the enormousness of the labor of human beings. The old monks doubtless simply fed and clothed the workmen, who quarried the stones and laid them up in these walls.

Another landmark of old days is found in St. John's church; remnants of a structure placed here in the eleventh century are very impressive; it has been finely restored in part. Many visitors drive to Mr. Gladstone's, six miles, and to the Duke of Westminster's, three and a half miles; driving over the perfect roads and through the lovely country is delightful.

From Rugby I diverged to Leamington, stopping at Richmondville hotel \$1.50 per day, a pretty place; Mr. and Mrs. Fenton have many American visitors. Stratford-on-Avon is about 15 miles distant, reached by rail easily. The poet's birthplace, the "New Place" he bought and where he died, the church on the Avon where he was buried and where a monument was erected by his family are the only points that possess the eternal interest that will forever draw pilgrims. Last year 24,000 entered the plain house where he first drew breath. The flat stones that compose the floor are doubtless the same his little feet trod; the stout oak-planks of the floor of the rooms overhead are undoubtedly the same as then lay there. The window-panes are filled with diamond scratched names of visitors; the walls are covered with names; the fame of Shakespeare is greater than that of any king; he was a ruler in the realm of thought; Shakespeare cannot die.

Returning to Rugby, the next point made was London. The Midland or Northwestern hotels are convenient; the price of rooms for two is \$1.25 in the former, and no fees. It is not far to the British museum from the Midland, and in the vicinity of this and Russell square, which is near by, are numerous boarding houses. I selected No. 5 Upper Woburn Place, where the prices are from \$7.00 to \$10.00 per week. This locality is a favorite with Americans because it is near Euston road, St. Pancras church, and King's Cross, all well known landmarks from which omnibuses go to all parts of the city; also near the Metropolitan, or Underground, railway. The squares are full of trees and the streets quiet.

A. M. K.

**July 10-13.—N. E. A. meets at Asbury Park, N. J. One fare for round trip.**

Arrangements have been made that will give the teachers of New York the opportunity to attend the entire session of the New York State Teachers' Association at Saratoga, and also to be present during the most important part of the meeting of the National Educational Association at Asbury Park. A special train is to leave Saratoga on Wednesday, July 11, in time to reach Asbury Park on the evening of the same day.

## An Anarchist's Fatal Thrust.

Marie F. Sadi Carnot, president of the French republic, was stabbed in a carriage at Lyons on June 24 by an Italian anarchist named Santo and died a few hours later. The act was in revenge for M. Carnot's sanctioning of the death sentences of several anarchists. France and the world were horrified at the crime; Madam Carnot received numerous telegrams of condolence from rulers and other distinguished men. In France the feeling against anarchism grew very bitter. There was also a strong feeling against the assassin's countrymen. Italians were attacked by mobs at Lyons and elsewhere. The Italian minister, however, expressed his sorrow for the crime and characterized the murderer as "a man without a country."

M. Carnot was elected president after the forced resignation of Jules Grévy in 1887. He was a man of strong sense and carried



M. CARNOT, the murdered president.

the country safely through the Boulangist troubles and kept in check the anarchists and revolutionary socialists.

It was feared at first that the killing of the head man of the republic would plunge the country in revolution. Three days after the assassination, however, the national assembly met at Versailles and elected Jean Casimir-Perier president for the full term of seven years. It is now known that M. Carnot would have refused a reelection and that M. Casimir-Perier was his choice as successor.

The new president is a wealthy man and a conservative, and is likely to use the great powers conferred on him by his office wisely and well. The three problems which are most pressing for the

government of France are order at home, peace, and dignity in its foreign relations, and a wise colonial policy. As to the first, he fully understands the necessity of enforcing order and is sure to have that active sympathy and confidence which proved fidelity and courage command. There is little danger that he will pursue a reckless foreign policy. In the colonial policy of France he will be likely to seek the co-operation rather than to excite the jealousy and opposition of other governments. Probably his hardest struggle will be with the socialists. That this element would make trouble if the opportunity came is shown by their attempt at the election to abolish the presidency, and by their shouts of "Vive la revolution!"



M. CASIMIR-PERIER, newly elected president

Roanoke college, Salem, Va., which has held its own in the number of students enrolled during this year of general depression, has just closed its forty-first year with a very successful commencement. Forty-eight students won distinctions in scholarship, the largest number ever awarded by the faculty. The order during the session has been very good, and although the college has felt the financial stringency, the year has been encouragingly successful. Work has begun on the annex to the library building, which will double the floor space, and quadruple the value of the library to the students, especially in their topical and intensive studies. The annex will be used for a reference library and reading room which will be open daily. With this addition, the main body of the building will be thirty by ninety-five feet, and seventy-two feet through the wings. The annex will be completed early in the fall, and Roanoke will then have the best college library building in the South.

## New York City.

Eighteen hundred of the city's public school teachers enjoyed the first annual excursion of the New York School Teachers' Association. Rotan Point, Conn., was invaded by the many happy school ma'ms for the day.

When the people begin to talk about school reform there is hope for a better condition of things. The meeting of Good Government Club E, held last month to discuss the necessity of improving the public school system by abolishing the present management and vesting full control of the affairs of the department in the board of education, was well attended. The plan advanced by Col. Stephen H. Olin which was outlined in a recent issue of the *Educational Review* found much favor.



PHYSICAL CULTURE CLASS STATE NORMAL SCHOOL, NEW BRITAIN, CONN.

## Hollins Institute, Va.

[SPECIAL CORRESPONDENCE.]

This institution is situated in one of the most delightful regions in the country, a few miles from the Natural Bridge; practically in a charming suburb of the rising city of Roanoke. The school was established in 1842, as "The School at Botetourt Springs;" a co-educational academy, by a clergyman from New England, with special regard to training teachers. Ten years later, it was reorganized as the "Valley Union Seminary" for girls; there being in 1842 no chartered institution for girls in the state. In 1855 Mr. John Hollins, inspired by his good wife Anne Hollins, took the institution under personal financial care, gave it his own name and proposed its ample endowment; a good intention prevented of accomplishment by the wreck of their fortune in the Civil war. Nearly fifty years ago Dr. Charles L. Cocke assumed the management of the school, under an independent board of trustees, and from that day has given himself to the work with a devotion and general breadth of view concerning the education of young women which entitle him to a distinguished place among the educators of the country.

Now, at the age of 74, he can look back on half a century of steady growth and a reputation co-extensive with all the Southern states. During the past year twenty states have been represented in its two hundred pupils.

Among the many excellent schools for young women in the South, Hollins Institute has several well defined features that make it a prominent object of interest to the educational historian, apart from its conspicuous merits as a seat of learning.

1. It is declared by its authorities to be the oldest academical school in Virginia for girls, and, by its success, has greatly stimulated the establishment of similar institutions in the state.

2. It has educated great numbers of girls, especially from the Southwest, the state of Texas always being represented by numerous delegations; Georgia and North Carolina, also largely represented.

3. It has made a special point of training teachers, and its teaching graduates are now scattered all over the South and West. It is also noted for the graduation of numbers of the daughters of clergymen, Christian workers, and representatives in the foreign mission fields. It has aided large numbers of young women of high ambition and good ability, but in humble circumstances, to obtain an education.

Hollins Institute was one of the few schools that remained in session during the Civil war. At the commencement preceding the fall of Richmond and the Confederacy, Dr. Edward S. Joynes, then a professor in the school, made a report to the trustees on the necessity of establishing a fully equipped normal school for the young women of the state, one of the ablest educational documents on this subject ever presented to the Southern people. The trustees voted to re-organize the school with this end in view and were only prevented by the general collapse of educational affairs at the close of the war. REV. A. D. MAYO.

## Bridgeport's School Exhibit.

[SPECIAL CORRESPONDENCE.]

Mr. J. C. Witter, who has held the position of supervisor of drawing and penmanship in the public schools of Bridgeport, Conn., for the last four years, has resigned to become editor of *Art Education*.

One knowing the adverse conditions existing in Bridgeport when Mr. Witter went there could hardly realize that he was in the same city should he step into the Art Department of the Public Library, a magnificent hall, and see the splendid exhibit of drawing, color, and manual training from pupils of the schools. Good judges say that the exhibit of color work excels any exhibit of children's work at the World's fair last year. In addition to artistic designs for carpets, wall decoration, friezes, etc., in the softest and richest colors, there are flags, weather signals, autumn leaves in the natural colors and textile designs that deceive the most expert at first into thinking them real goods. The blending of colors in paper work is simply wonderful.

Much attention has also been given to elementary manual training, and many useful as well as beautiful objects direct from the children's hands are arranged in a fine glass case.

When Mr. Witter went to Bridgeport neither the pupils nor teachers knew anything but to copy the figures in a drawing-book and some teachers at first ridiculed the idea of having the children bring objects to draw from. Even the high school pupils were totally helpless when a simple object was placed before them to draw, and the majority of the pupils (high school) drew straight lines for ellipses. Drawings taken in an examination at that time are on exhibition beside some taken at the last examination, and the comparison is simply astounding. It does not seem possible that such a marvelous improvement could have been produced in the time, especially as there has been no special teacher of drawing in the high school, and all the instruction the pupils have received has been thirty minutes once in two weeks from the general supervisor.

## Correspondence.

## What Are the Boys Reading?

Is it not time that we call a halt and ask what are the boys reading? A few titles which had been gathered lately are enough to frighten thoughtful teachers and parents. What can be expected from stories with such promising titles as "Mosquito Jack, the Hustler Gamin," "The Masked Avenger," "Texas Jack's Chums, or the Whirlwind of the Wild West," "The Street Spotter's Weird Hunt," etc.?

Or if alliteration please you, here are some effective titles: "Dandy Dick's Double," "Cowboy Chris, the Man of Caliber," "Silvertip Steve, the Sky Scraper from Siskiyou."

None of these titles are imaginary; all are taken from "Popular Libraries." Alas! they are only too popular.

These cheap, blood and thunder books are filling our prisons. It is time that every possible precaution should be used against them. One bad book may poison a boy's mind, and set him on the road to ruin. Two of the most pitiful disappointments to parents are victims of the dime novel habit.

What is to be done? Boys will read; and they don't and won't read "Miss Nancy" books. I don't blame them. But there are plenty of good, wholesome books, with sufficient "go" to suit the most exacting boy. It should be the business of every friend of boys to see that they are helped to good, entertaining books. A long list could easily be made, but a few titles may be suggested. What boy can resist "Tom Brown"? Then there are Cooper's novels, plenty of Indian adventure in them, yet quite safe. Dana's "Two Years Before the Mast," Kingston's books, Kirk Munro's, and W. O. Stoddard's may be recommended, and are sure to be liked. I know that Scott is called old-fashioned nowadays, but what boy can find "Ivanhoe" dull?

So many first-class authors are writing for the young, that it makes one wish to begin life over again. Surely in these days no boy need depend on the dime novel for reading matter.

ADELAIDE L. ROUSE.

## Shorthand.

The wonderful art has taken the world by storm, and profiting by the vacation and an almost universal desire among young people to become stenographers, colleges are advertising widely, and impostors are filling the newspapers with false guarantees to teach the art by mail, in an incredibly short time.

As a competent stenographer and typewriter, I will give my experience in acquiring it, for the benefit of others so inclined:

A college graduate, as well as a teacher of four years' successful work, I hope I may be pardoned for having a conceded notion that I understood the best methods of study, and for the idea that if the ordinary pupil learned shorthand in three months, I could master it in a little less time. Accounts of astonishingly large salaries earned, by court reporters, instilled in me a desire to change my profession; no longer remain a \$50 per month pedagogue, but learn to write as fast as people talk and make hundreds of dollars. I continued teaching, rose early and spent an hour each morning over the principles of the Benn Pitman system. For two months I labored thus before school closed. Immediately after, I entered one of the best business colleges in the country, paying \$50 for a lifetime scholarship upon the advice of the principal, although I confidently assured myself that I would have finished in eight weeks. Study in earnest began and for two months I devoted seven hours hard daily labor to it. At the end of four months, I was capable of doing office work and could write about 90 words, new matter, per minute. At this juncture, occurs what the teachers refer to as "stenographic depression;" the student invariably becomes despondent, discouraged, and generally out of humor with the whole thing; and, no wonder! for the most diligent practice will not succeed in making a gain of more than seven words a week. Consider the fact that a speed of 150 words per minute is requisite for a court reporter's diploma, and you will see what a task lies before the student yet.

Colleges that advertise to make competent stenographers in three months are a sham and a delusion. I know it. I have tried it. And a course by mail cannot fail to allow the student to stray into errors that he will ever regret.

Most pupils take office work as soon as capable, which means pay of \$25 or \$30 per month, unless the work is unusually heavy when a prosperous firm may offer \$40, or \$50 at most. All his dreams of court work are past; but few ever reach that goal of perfection, so the price remains high and the few soon give way to nervous prostration from over strain, and live the little remainder of their lives in ill-health and riches (?).

Shorthand is worth nothing unless the writer can transcribe his notes, which calls for skill on a typewriter, and thorough knowledge of spelling, language, punctuation, and business correspondence. One of the best stenographers I ever knew cannot hold a position longer than three days, because of his ridiculous spelling.

Suppose one has won the speed of 150 and the degree of C. R.—the end is not here, for if not on regular duty he must practice—practice-practice every day of his life or some time find himself under a fire of words with which he is unable to cope. Besides writing, he must be ready to read his notes easily and rapidly without an error; the use or omission of one word may be the thread on which hangs a fortune—maybe a life.

The study is fascinating; the mental drill necessarily exercised is excellent for the mind; after acquired it is valuable in personal notes and records; but—I continue in my first chosen work. I am still a teacher through preference.

E. B.

There are no parts of our country where Mrs. Bolton's "Famous" books have not been read with pleasure. She has the faculty of writing biography in a popular form for young people. Besides these books, T. Y. Crowell & Co. issue the Children's Favorite Classics, Crowell's Standard Library of the best fiction, history, biography, and poetry, the Handy Volume Classics in Prose, A Dictionary of Quotations in Prose, A Dictionary of Quotations from the Poets, Roget's Thesaurus of English Words, and many other books for libraries and home reading. The Astor Library of Standard Literature is specially adapted to school libraries and supplementary reading.

There is danger in impure blood. There is safety and health in Hood's Sarsaparilla.

## List of Summer Schools.

## NEW ENGLAND STATES.

MAINE—School of Expressive Art, summer session Aug. 6-25, at Belfast. Address M. W. Laughton, 364 Massachusetts Street, Boston, Mass.

Summer Institute, State Normal School, at Plymouth, Aug. 20-31. Address State Super. Fred. Gowing, Concord.

MASSACHUSETTS—Martha's Vineyard Summer Institute. W. A. Mowry, president, Salem, Mass. Beginning July 9, five weeks, at Cottage City.

Harvard University, Summer School, Cambridge. Begins July 5; five or six weeks. Address Prof. N. S. Shaler, Cambridge, Mass.

Normal Institute of Vocal Harmony, Aug. 14-31, at Lexington. Mrs. H. E. Holt, sec., box 109, Lexington.

Amherst Summer School. Session of five weeks beginning July 2. Address William I. Fletcher, Amherst.

Sauveur School of Languages opens July 2 at Amherst college. Address Prof. W. L. Montague, Amherst.

Clark University Summer School. At Worcester, July 16-28. Dr. G. Stanley Hall. Address L. M. Wilson, Clark University, Worcester.

Summer School of Applied Ethics. At Plymouth, Mass. Begins July 12.

School of Applied Ethics, Plymouth, Mass., July 12-Aug. 15. Jas. MacAlister, LL.D., Phila., Pa., pres.; Ray Greene Huling, Cambridge, Mass.

RHODE ISLAND—American Institute of Normal Methods (Eastern school). At Providence, July 17 to Aug. 3.

## MIDDLE ATLANTIC STATES.

NEW YORK—The National Summer School of Methods, Science, Oratory, Literature, etc., at Glens Falls, beginning July 17. Sherman Williams, Glens Falls, and C. F. King, Boston Highlands, Mass., managers.

The Catholic Summer School of America. Third session, at Plattsburg on Lake Champlain, beginning July 14, four weeks. Rev. Thomas J. Conaty, D.D., president, Worcester, Mass.; Warren E. Mosher, A.M., sec., Youngstown, Ohio. Special course for teachers, under direction of Prin. John H. Haaren, Brooklyn, N. Y.

Chautauqua Assembly, College of Liberal Arts, and other schools, Chautauqua. W. A. Duncan, sec., Syracuse, N. Y.

Chautauqua Teachers' Retreat, at Chautauqua, July 5 to Aug. 1. In charge of Pres. Walter L. Hervey, of Teachers College, New York City.

The Summer School of Cornell University, for Teachers and advanced students. July 6-Aug. 16, Ithaca, N. Y. Jacob Gould Sherman, D.Sc., LL.D., pres., 41 East ave.; Prof. O. F. Emerson, sec.

The Central Summer School, Chautauqua Park, Tully Lake, N. Y. July 23-Aug. 10. A School of Methods and Review for Teachers. Address Edwin H. Chase, manager, 465 Chenango st., Binghamton, N. Y.

Mid-Summer School, Owego, N. Y. July 23-Aug. 10. George T. Winslow, pres. Address H. T. Morrow, manager, 446 W. Clinton st., Elmira, N. Y.

University of Rochester, summer session.

Summer Schools of the Brooklyn Institute of Arts and Science:

The Long Island Chautauqua Assembly association at Point o' Woods, Nat. W. Foster, Riverhead, N. Y., pres.

Summer School of Languages, Point o' Woods, Great South Beach, L.I. Address Prof. Chas. F. Kroen, Stevens Institute of Technology, Hoboken, N. J.

PENNSYLVANIA—Summer Course of the University Extension Society at the University of Pennsylvania, Philadelphia, July 2-28. Special course for teachers.

NEW JERSEY—Summer Course in Languages, under management of the Berlitz school of languages, at Asbury Park. Circulars, 1,122 Broadway, New York city.

NEW JERSEY—Summer Session of Neff College of Oratory of Philadelphia, June 26-July 21. Silas S. Neff, pres., 1,414 Arch street, Philadelphia.

DELAWARE—Summer School of Methods, at Dover July 2-Aug. 3. County Supt. C. C. Tindal, manager.

## SOUTHERN STATES.

VIRGINIA—Virginia Summer School of Methods at Bedford City, Va., beginning Monday, June 25, and closing Friday, July 20. John E. Massey, supt. of schools, Richmond, Va.

NORTH CAROLINA—University of N. C., summer session, July 2-28 at Chapel Hill. Address George T. Winston.

ALABAMA—Peabody Summer School of Pedagogy, associated with and under the state normal college, Troy. Dr. E. R. Eldridge, director.

LOUISIANA—Louisiana Chautauqua, summer session, July 2-30, at Ruston. Rev. T. K. Fauntleroy, director.

MISSISSIPPI—Summer School of Natchez College begins June 4, at Natchez, Miss. S. H. S. Owen, pres.

University Summer Normal School. Four weeks, beginning June 11, 1894. Chancellor R. B. Fulton, local director, Oxford, Miss.

TENNESSEE—Peabody Institutes to be held at Knoxville, Monteagle, Nashville, and Jackson respectively, July 9-Aug. 3.

Summer Training School for Institute Conductors at Peabody normal college, Nashville, June 11-22. Chancellor Payne, conductor.

Vanderbilt University Summer School for Higher Physical Culture, Nashville, Tenn., July 16-Aug. 16.

TEXAS—Summer Normal, Weatherford College, June 25-Aug. 3. David S. Switzer, Weatherford, director.

Summer Normal Hico College at Hico, June 18-Aug. 3. School of Methods at Galveston, June 5-23. Dr. O. H. Cooper, director.

## Teachers' Association Meetings.

JULY 2-28—Summer Meeting of the American Society for the Extension of University Teaching, University of Philadelphia at Phila.

July 6-10—National Council of Education at Asbury Park, N. J.

JULY 8-12—South Carolina State Teachers' Association at Spartanburg.

JULY 9—New Jersey State Teachers' Association at Asbury Park, N. J.

JULY 9—Virginia State Teachers' Association, Bedford city.

JULY 9-11.—The 47th annual meeting of the New York State Teachers' Association at Saratoga.

JULY 10-12—American Institute of Instruction, Bethlehem, N. H.

JULY 10-12—Louisiana Educational Association at Alexandria.

JULY 10-13—National Educational Association, at Asbury Park, N. J.

JULY 11-13—Maryland State Teachers' Association convenes at Annapolis.

AUG. 16—Northeastern Teachers' Association, Arkansas, at Paragould.

School of Methods at Fort Worth, June 5-23. Supt. W. S. Sutton, Houston, director. San Marcos Summer School of Science and Pedagogy at San Marcos, June 11-July 14.

## CENTRAL STATES.

WISCONSIN.—Summer School held at Ellsworth, Pierce Co., Wis. Six weeks beginning July 9. Supt. J. F. Shaw; Prin. C. J. Brewer.

Summer School at Muscoda, Wis. Six weeks beginning July 9 to Aug.

17. Under management of Joseph Schaefer and Edgar E. DeCore, Fla.

University of Wisconsin Summer School. Address Prof. J. W. Sterns.

Teachers' Summer School at Portage, Wis. July 9 to Aug. 11. For particulars address E. C. True, county superintendent, Portage, Wis.

MICHIGAN—Bay View Summer University, at Bay View. July 12 to Aug.

14. For circulars write to the superintendent, Mr. John M. Hall, Flint, Mich.

University of Michigan Summer Courses of Instruction, July 9 to Aug. 17, at Ann Arbor. Dr. H. A. Hinsdale, pres.; J. H. Wade, sec'y., Ann Arbor.

Summer School of Pedagogy and Review, June 25 to Aug. 3. G. J. Edgcumbe, principal, Benton Harbor, Mich.

Summer Sessions of Ferris Industrial School, at Big Rapids, May 21 to July 2.

Summer School of Pedagogy and Kindergarten Training, at Grand Rapids, July 5 to Sept. 1. Miss Elvira Cuddeback, Grand Rapids, director.

Kindergarten Training School, at Grand Rapids, July 5 to Sept. 1. Miss Clara Wheeler, Grand Rapids, director.

Teachers' Summer School, Midland, Mich. Six weeks, beginning July 9. Address J. H. Culver, Merrill, Mich.

Sand Beach Summer Normal, Sand Beach, Mich. June 27. Five weeks.

Summer School of Pedagogy and Review, Benton Harbor, June 25-Aug.

3. G. J. Edgcumbe, Prin.

OHIO—Lakeside Summer School, at Lakeside, July 10 to Aug. 7. Address W. V. Smith, Port Clinton.

INDIANA—Indiana University Summer School opens June 26, closes July

27. Address Henry S. Bates, Bloomington, Ind.

Summer School, Columbus, Indiana. Eight weeks beginning June 18,

1894. Under management of Columbus Business University. J. A. Lar-

nagy, supt. Republican building.

ILLINOIS—Cook County Normal School Summer Session begins July 9, and continues three weeks. Col. Francis W. Parker, principal; Prof. Wil-

bur S. Jackman, manager, Englewood, Ill.

American School of Sloyd (Manual Training), Cook County Normal School, Englewood, Ill. July 9-27. Walter J. Kenyon, director.

Summer School of Pedagogy, University of Illinois, at Champaign, June

18 to July 13. Address Prof. Frank M. McMurry, Urbana, Ill.

Summer Course in Languages, Auditorium, Chicago. Under manage-

ment of Berlitz School of Languages. Circulars, 1,122 Broadway, New

York city.

American Institute of Normal Methods (Western School), Aug. 7-24, at Chicago.

Summer School, Greer Normal College, Hooperston, Ill., June 13. Wm. H. Monroe, pres.

Sauveur College of Languages, Rockford College, Rockford Ill., July 3.

Address Dr. L. Sauveur, 6 Copley street, Roxbury, Mass.

KENTUCKY—Normal Training School, at Sharon Grove, May 21 to June

30. Address Walker Wilkins, Sharon Grove.

MINNESOTA.—University of Minnesota, Summer Session, July 30 to Aug.

24 at Minneapolis. State Supt. W. W. Prendergast, St. Paul, director.

IOWA.—Callahan Summer School of Methods, at Des Moines. C. W. Martindale, Des Moines, Iowa, president.

State University of Iowa Summer School for Teachers, begins June 18

and continues four weeks. Dr. Chas. A. Schaefer, pres.; J. J. McConnell, director of University Extension, Iowa City.

Des Moines Summer School, Des Moines, Iowa, July 9-Aug. 4.

KANSAS.—Summer School at Norton, begins June 18 and continues till

August 24. Supt. N. H. Baker, Norton, director.

NEBRASKA.—State Normal Summer School, at Peru, June 7 to July 3. A. W. Norton, Peru, manager.

University of Nebraska Summer School, at Lincoln, June 14 to July 6.

Lincoln Normal University Summer School, at Normal.

Western Normal College Summer School, at Lincoln, June 12 to July 31.

Fremont Normal School Summer session, June 12 to Aug. 21, at Fremont.

Perkins Co., Summer Normal, at Elsie. June 25 to Aug. 13.

Hebron Summer School, at Hebron, June 18 to July 28.

Union Summer School, at Ashland, July 9 to Aug. 18.

Holdredge Summer School, at Holdredge, June 18 to Aug. 10.

## ROCKY MOUNTAIN AND PACIFIC STATES.

WASHINGTON.—East Sound Summer School, Orcas Island, San Juan archipelago, July 16 to Aug. 4. Supt. J. M. Shields, pres.; Parker Ellis, sec'y.

COLORADO.—Summer School under the auspices of the School for Teachers, at Denver. June 11-July 20. Fred Dick, principal.

Colorado Summer School of Science, Philosophy, and Languages, at Colorado Springs, during the month of July. Address Edwin G. Dexter, director, Colorado Springs.

CANADA—Summer Session of National School of Elocution and Oratory, Grimsby Park, Ontario, Can., July 3-Aug. 12. Geo. B. Hynson, pres., 1,020 Arch street, Phila., Pa.

Every teacher will be interested in Public Libraries of America, by W. I. Fletcher, librarian of Amherst college library, published by Roberts Brothers. It is full of information for lovers of books. The Columbian Knowledge series furnishes timely and readable monographs on subjects of permanent interest. They are scientific but untechnical and illustrated. Dr. Mowry's Talks with My Boys is an excellent book for teachers. Send for Roberts Brothers new descriptive and educational catalogue.

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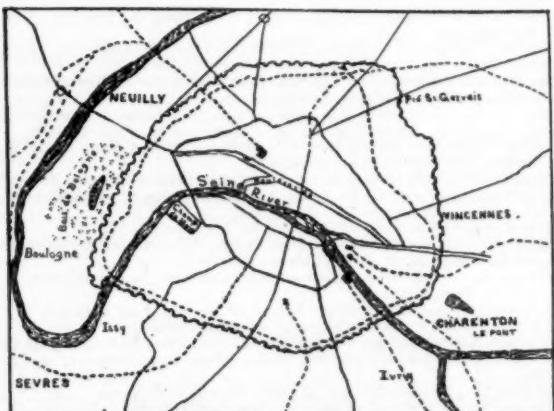
### Studies of Great Cities.

#### PARIS.

Paris has justly won the reputation of being the most beautiful city in the world. It is situated on both sides of the river Seine, about 110 miles from its mouth and has at present a population of about 2,450,000. Its circumference is about thirty miles. The city lies in a hollow about 200 feet above the level of the sea, and is surrounded by low hills, which in their highest ranges to the north only reach an elevation of 200 or 300 feet, as at Montmartre and Belleville. These hills, which are separated by narrow valleys or plateaus, are encircled at a distance of from two to five miles by an outer range of heights. The Seine enters Paris at the southeast and leaves it at the west, dividing the city into two parts and forming the islands of La Cité and St. Louis, which are both covered with buildings.

Paris is mentioned in Julius Caesar's Commentaries, under the name of Lutetia, as a collection of mud huts, comprising the chief settlement of the Parisii, a Gallic tribe conquered by the Romans. In the fourth century it began to be known as Parisia, or Paris, from this tribe. Clovis chose it as the seat of his government in the sixth century. It suffered much from the invasions of the Northmen, but rose in importance in the tenth century when Hugh Capet made it the capital of the Frankish monarchy.

In the middle ages Paris was divided into three distinct parts—La Cité, on the islands; the Ville, on the right bank, and the Quartier Latin, or university, on the left bank of the river. During the wars of the last Valois the city sustained several sieges. Henry IV. did much to enlarge it and to efface the disastrous results of the occupation by the English. Louis XIV. converted the old ramparts into public works or boulevards, organized the police, established drainage and sewerage works, and founded schools, hospitals, almshouses, etc. Under his rule the city became the center of European civilization. Napoleon I. made improvements on a newer and grander scale, and all the treasures of



MAP OF PARIS.

art and science which conquest placed in his power were used to embellish the city.

But it was reserved for Napoleon III. to make Paris the most commodious, splendid, and beautiful of modern cities. When he became emperor Paris was, in the main, a labyrinth of narrow, dark, and ill-ventilated streets. Napoleon, ably assisted by Baron Haussmann, had old houses in the center of the town pulled down, and connected by broad and straight thoroughfares all the finest existing squares and boulevards. In place of the old houses fine buildings were put up in the most approved style of modern architecture. Two straight and wide thoroughfares, parallel to and near each other, crossed the whole width of Paris from north to south through the Cité; a still greater thoroughfare was made to run the whole length of the town north of the Seine from east to west. The old boulevards were completed so as to form outer and inner circles of spacious streets—the former chiefly lying along the outskirts of the old city, the latter passing through and connecting a long line of distant suburbs. Many other improvements were contemplated—such as botanical and zoological gardens, museums, and underground railways, and the deepening of the Seine so as to make Paris a seaport—when the war of 1870 occurred. During the days of the commune the splendid column erected to the memory of Napoleon was destroyed, but has since been rebuilt, and millions of dollars of property was burnt. After the war the city arose from its ashes like magic.

The Seine is spanned by more than two dozen bridges, many of them very beautiful; they communicate with spacious quays, planted with trees, which line both banks of the Seine. Among

the public squares, the most noteworthy is the place de la Concorde, which connects the garden of the Tuilleries with the Champs Elysées. In the center stands the famous obelisk of Luxor, brought from Egypt in 1836. It is 73 feet high and covered with hieroglyphics. The famous buildings include the Tuilleries, for a long time a royal residence; the Louvre, once a royal residence, now a museum of antiquities; the Palace of the Luxembourg, containing galleries of paintings; the Hotel de Ville opposite the island of the Cité, and near it the Palais de Justice; Notre Dame, a magnificent church on the isle of the Cité and the Sorbonne, the building of the University of Paris. The city has numerous triumphal arches, columns, and other works of art commemorative of historical events; no other city can boast of so many.

Paris was provided, under Louis Philippe, with fortifications extending 30 miles around, and in addition to these a score of detached forts have been erected at definite distances from one another. The Champ de Mars is a vast sandy plain on which reviews and other military displays and national festivals are held. On one corner of it stands the famous Eiffel tower.

The railway system of France centers in Paris; eight lines, connected by a circular line, issue in different directions. The city occupies the first rank as regards commerce and industry. The principal manufactures include articles of luxury, fashion, play, nicknacks, bronzes, leather goods, musical instruments, artificial flowers, shawls, carpets, tapestry, etc. In France art and industry walk hand in hand. The scheme has recently been revived of making Paris a seaport, by deepening the Seine so as to allow the passage of large ships.

### The Problem of Flying.

For many years inventive minds have been at work trying to solve the problem of aerial navigation and the failures have been so numerous that some have declared that human flight was impossible. Other scientists have held the contrary opinion and hence the experiments go on. Mr. Lilienthal, of Berlin, is trying to imitate the flight of birds by extended wings. His attempts so far have been confined to starting on an eminence and sailing down an incline. He claims that the peculiar shape of his wings gives great sustaining power with comparatively small area. His greatest flight so far is about 250

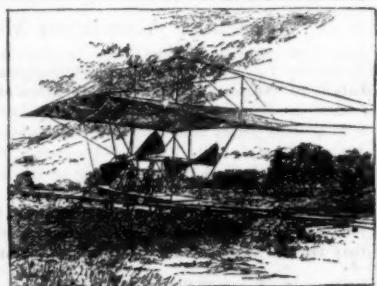
feet. In spite of all precautions Lilienthal has frequently found himself the sport of winds. Even with an apparatus with a wing surface of only about 85 square feet, he has several times been lifted from a flat surface by unexpected gusts of wind, and saved himself from accident only by a provision by which he could rapidly extricate himself from the machine. At first he received many slight injuries to hands and feet on landing, but he has now attained such proficiency that he can land without difficulty.

Mr. Maxim, of Baldwin Park, England, is at work on quite another problem—the construction of an air ship. (This and Lilienthal's apparatus we find described in the *Literary Digest*.) In a recent interview he said: "The principle I have worked on generally is the kite. The large cloth frame at the top of the model is the aéroplane, or main kite surface. The lesser aéroplane above the platform, or car, the side aéroplanes or wings, and the flat pointed rudders fore and aft, are designed to furnish additional kite surface. It is necessary to make it, however, so that we can run it in a calm against the air, and for this purpose I have a railway track, and instead of cords to hold the kite against the wind, I employ a pair of powerful screw propellers driven by a steam engine. In this manner I can drive the machine exactly as I please, can ascertain exactly how much the push of the screws is, and, at the same time, find out exactly how much the machine lifts at different speeds."

To afford his interviewer a better idea of the machine than could be gained in the building in which it is kept, Mr. Maxim had it brought out on a railway track which runs from the work-shop across the park. The machine is a framework of black steel rods of varying size, with a square frame of white cloth, fifty feet by fifty at the top, and an inclined wooden platform, eight feet by forty,



LILIENTHAL FLYING.



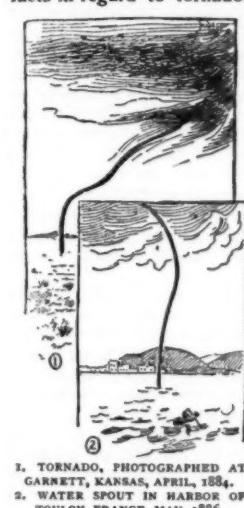
MAXIM AIR-SHIP.

resting on wheels upon the track below. On the platform near the front end, is a small boiler house, and ten feet behind it a frame eleven feet high, on which are two sets of compound cylinders; and there are two big wooden screws above the two sides of the platform, and eighteen feet apart. Apart from these fundamental accessories are a water tank, a naphtha tank, and an indefinite number of rods, and very small wire ropes, to give strength and compactness to the whole. The machine as it appears in the accompanying illustration is without the side-planes. The big rudders of cloth on steel frames fore and aft were also absent.

Steam being got up, the screws were alternately tested at high speed, the dynamometer index marking 400, 500, 600, and finally 1,200 pounds of push. The pressure was then diminished below 500, the word was given, and the machine flew over the 1,800 feet of track in less time than it takes to tell it.

### Tornadoes and their Effects.

Prof. Harrington, of the weather bureau, gives some interesting facts in regard to tornadoes. Right here it may be well to correct a false impression circulated by the newspapers in regard to storms. The so-called "cyclones" reported in the daily prints are usually tornadoes; cyclones are storms covering a much wider extent of country. The word "tornado" is from the Spanish and means twisted. Tornadoes are small whirling storms of great intensity. The hurricane, on the other hand, is a violent storm, characterized by sudden changes of the wind. The largest trees may be uprooted and carried off by a hurricane. Tornadoes may do much more than this; they sometimes uproot houses, digging out the very foundation stones. They not only uproot trees, but they may twist off the strongest trunks, acting so quickly that the trees have not time to uproot. Their force and velocity have been such that a lath has been driven through a sapling, reminding one of the old experiment of firing a candle through a board.



1. TORNADO, PHOTOGRAPHED AT GARNETT, KANSAS, APRIL, 1884.  
2. WATER SPOUT IN HARBOR OF TOULON, FRANCE, MAY, 1886.

What are called tornadoes seem to be at least five different sorts of phenomena. The first is a slight phenomenon, really a dust column. Such was probably the character of the "tornado" photographed at Garnett, Kan., in 1884. They are much like some waterspouts. The second is the real tornado or "twister." It is characterized by a funnel hanging down from the clouds. These are the true tornadoes, and most of the facts given here relate to them. The third form appears rather as horizontal than as vertical whirls. The front extends in length as they advance, so that the territory they pass over is fan-shaped, instead of the strap-shaped area of the tornadoes proper; they are not nearly so destructive as the second form. The horizontal whirls pass by insensible gradations into thunderstorms, and severe types of these are sometimes called tornadoes or "cyclones." The fifth form is what may be called a wind-rush—that is a little narrow gale. Sometimes several wind-rushes travel parallel to each other at a distance of a few furlongs apart.

Tornadoes sweep most frequently in the United States across the flat region extending from the hundredth meridian to the Alleghany mountains; even here they do not occur often, however. They sometimes occur east of the Alleghanies. Their path is a few rods wide and a few miles long, in a northeastward direction. The danger is greater on the south side of a tornado than on the north side, because there the speed of advance (twenty to forty miles an hour) is added to the speed of the whirl in the tornado. When a tornado actually comes which, though not probable is always possible, the proper thing to do is to run northward, if there is time, and it will pass to the south; run south of southeast if it passes well to the north; take to the cellar if it is not certain where it will go. The cellar is the safest place in all cases, and its west wall or southwest corner is the safest part of it.

When a tornado crosses a north-and-south fence and leaves it standing, toward the south end the mud is plastered on the west side, and toward the north on the east side; this is because the tornado is a whirl, and the direction of motion is contrary to that of the sun. The tornado often strips the clothing entirely off its human victims. If its victims are fowls, the feathers are often stripped off completely.

Tornadoes sometimes exercise a curious expansive action. If the walls of a house are not carried away, and especially if the whirl passes centrally over it, they are likely to fall—not inwards or toward one side, but outward in all directions. At other times the effect is more like that of suction. Boxes are opened and their contents tossed out. Files of papers are neatly uncovered and the papers promptly distributed over the country, but especially toward the northeast.



DUST STREAMS IN A DUST STORM,  
TO ILLUSTRATE THE GREATER  
EFFECT ON THE SOUTH SIDE  
OF A TORNADO.

**A New Substance for Thermometers.**—It is said that the quicksilver in our thermometers is to be displaced by a new substance made from coal tar and called tulnol. It expands regularly under heat, and freezes at a lower temperature than mercury.

**The Largest Balloon in the World** has just been constructed at Holloway, near London, England. It is a sphere of 57.24 feet diameter, has a capacity of over 100,000 cubic feet, weighs one and a quarter tons, and will lift an additional weight of a ton. It is to be used for the purpose of obtaining continuous meteorological observations for a period of six days without descending. It has been successfully tested.

### Bavaria's Mad King Dethroned.

The upper house of the Bavarian diet has agreed to the proposition to place Otto, the insane king, under a guardianship and transfer the crown to Prince Luitpold, the regent and heir presumptive.

Otto Wilhelm Luitpold is forty-six years old and has been insane more than half his life. He nominally succeeded to the

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throne June 13, 1886, when his brother, King Ludwig II. (who had been deposed three days before because his insanity had become unendurable), committed suicide by drowning himself in the lake of Starnberg, in the park of Berg castle, to which he had been removed for safe keeping. Ludwig had been crazy for years upon music and palaces.

King Otto never actually reigned. Prince Luitpold, his uncle, was appointed regent when King Ludwig was dethroned and has been the real ruler ever since then. Otto has long been confined in the Castle of Fuerstenried, in the midst of a dense forest, not far from Munich. The most disagreeable task a Bavarian soldier has to perform is to do garrison duty there, the gloom of the surroundings being intensified by the dreadful appearance of the mad monarch. Tall, almost as gigantic in stature as his brother Ludwig, King Otto's appearance is described as enough to startle any one who sees him for the first time. When he was first placed in practical confinement he was almost smooth-faced and genteel in looks and manners. Now his hair is long and unkempt, and his bushy brown beard reaches below his waist. There is a wild look in his eyes, the gaze of which remains steadfastly fixed straight ahead into empty space. He is always dressed in black broadcloth, and it is said that he requires a new suit almost every day, because of his antipathy to towels, handkerchiefs, or napkins.

He was seized with paralysis a few weeks ago and became completely dumb, but his appetite remained voracious and he slept a great deal. It is thought his end is near. He has been a victim of the strangest delusions. At one time he imagined his carpets were made of the finest glass and that it was dangerous to tread on them. At other times he would imagine it was fine fun to shoot peasants. A gun loaded with peas instead of buckshot would be given him and a man dressed as a peasant would pass within range occasionally. The king would shoot, the man would drop and the apparently lifeless body would be removed by guards. In this country we would think government was a farce if we had such a man even for a nominal ruler.

Prince Luitpold who succeeds Otto is seventy-three years old and has a score or so of grandchildren, so there will be no lack of heirs to the throne. He is soldierly and very popular. His eldest son, Prince Ludwig, now in his fiftieth year, married the Archduchess Maria Theresa, of Austria-Este, niece of the late duke of



PRINCE LUITPOLD.

Modena. Emperor William has long been in favor of Prince Luitpold's promotion to the throne, both because he has a high respect for the regent, and because he deems it wrong for a lunatic to wear the crown of any important German state, particularly of the second kingdom in size and population in the empire. Moreover, Prince Luitpold has had much influence in softening the old-time prejudice of South Germans against the North.

#### The Sacred City of Buddhism.

After all the activity in the field of exploration during this century there are still countries about which we know comparatively little. Tibet is one of these. It is a lofty plateau from which arise mountains of great height. The chief town is Lhasa, the holy city of Buddhism, which lies in a sheltered valley over 12,000 feet above the sea. The better class among the young men of Tibet enter the priesthood, and the priests fear that their cherished institution will be doomed if it comes in contact with European ideas. Lhasa contains only 15,000 people, but 20,000 priests are said to crowd the monasteries in its outskirts.

The authorities usually meet intruders some days' march from Lhasa. They are very polite, but will spend days and weeks arguing the pros and cons of their proposed visit to the capital. For seven weeks they talked with Bonvalot and at last told him that they could not conceive that his expedition had any other aim than the conquest of Tibet. They bade him farewell with the greatest appearance of friendliness and gave him food for his journey. Bower, another explorer, told them that he depended upon the friendship between the British and Lhasa governments to give him access to the capital. They replied that Tibet was forbidden ground to all strangers and that the two countries might be friendly without intruding on one another's soil. The Lhasa chiefs last year found Miss Taylor, the Englishwoman, robbed and destitute within three days of the city; they gave her the supplies she needed to carry her many days on her homeward journey.

Although they take such pains to keep out professors of other religions, Buddhists are welcomed with open arms; every year Lhasa, the home of the incarnate Buddha, is visited by many pilgrims from all over Eastern Asia. No white man has set foot in Lhasa since 1846, when Fathers Huc and Gabet, with stained skins and in the garb of Tibetan priests, spent many weeks there. If it were not for the Indian explorers who stole their way into the sacred city we should know but little more of Lhasa to-day than what was given so delightfully by Father Huc in his book. One of these lived there a whole year and made a survey of the city. The Dalai Lama lives at the monastery of the Mount of Buddha; he is not merely the great high priest, but is looked upon as the visible deity, the incarnation of Buddha. This monastery, surmounted by five gilded cupolas, sparkling in the sunlight, presents a gorgeous spectacle visible for miles around.

Not far from Lhasa is the great Sangpo river which flows for a thousand miles through Tibet. No one knew until 1888 how it reached the sea—some thought it flowed into the Brahmaputra; others, that it was tributary to the Irrawaddy. The question was settled by the explorer known as the Pandit K. P. He set out with the intention of following the Sangpo to the ocean, if possi-

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ble. Notice was given that if he was stopped he would cut logs, place upon them a certain mark, and throw them into the stream. Watch was to be kept of the Brahmaputra and Irrawaddy rivers for them. When only thirty-five miles from the Brahmaputra he was stopped by the fierce tribe known as the Abors. Several logs bearing his mark were picked up in the Brahmaputra late in 1888; the source of that great river had been discovered.

### Science and Industry.

**Australia's Rabbit Pest.**—In Queensland, rabbits exist in such large numbers that they have laid waste whole districts. In the region that they traverse they destroy the grass and herbage and leave the region as barren as a desert. From 1883 to 1889, \$5,000,000 was spent in trying to destroy the rabbits. Although 2,528,000 animals were killed each year, for which a bounty was paid by the government, the rabbits remained in full force. But the great drought of 1888 proved in one respect a blessing in disguise, as it was virtually the turning point in the solution of this vexed problem. The lakes and water-courses were fenced in by wire screens and the animals died by millions from thirst. Shutting out the water from the rabbits has been found the most successful weapon of destruction. Wire fences were the final resort of the colonists, who now regard the rabbit problem as solved. Fences are being constructed for this purpose all over the country, and one, shortly to be completed, will be 900 miles long.

**Power from Niagara Falls.**—The first practical test of the great hydraulic tunnel, which has been under construction at Niagara Falls, N. Y., for the past three years, was made recently. The paper mill, which is the first to get the benefit of the power, is the largest of its kind in the world. Its contract calls for 6,600 horse power, one-half of which is being used now. The hydraulic tunnel with a capacity of 120,000 horse power, is a success, and now there remains only the opening of the general power house, where 5,000 horse power turbines will operate 5,000 horse power electric generators for the transmission of power in this form. This opening will take place in June, and it is intended to give the event a celebration, at which distinguished savants, engineers, and state officials will be present.

**Big Buildings That May Fall.**—It is reported that fears are entertained for some of Chicago's big buildings. The city is built upon mud and soft clay, and no system of piles or concrete seems to have been entirely successful thus far. The post-office and custom-house, the board of trade building with its 325-foot granite tower, the city hall, all show indications of instability so marked that those having offices in them begin to feel alarm. The auditorium tower and the great masonic building are settling perceptibly, and, it is feared, dangerously.

**Chicago's Novel Bridge.**—It is claimed that the new bridge over the south branch of the Chicago river is the only one of its kind in existence. On either bank rises a tower of iron lattice work 191 feet high. The bridge, 89 feet in span and weighing 300 tons, extends between them, its ends fitting into grooves. It is fitted with counter weights, cables, and pulleys, all of which are governed by a 70-horse-power steam engine. When the bridge is to be opened the engineer throws off the balance, and the bridge

rises smoothly and horizontally in its grooves, halting at a height of 155 feet.

**How Asteroids are Discovered.**—More asteroids were discovered in 1893 than in any other year owing to the use of the camera. A camera with a specially quick-acting lens of from four to six inches diameter, mounted equatorially and driven by proper clock-work, is pointed to the heavens, and a negative taken, covering many square degrees of the celestial sphere. With an exposure of from one hour to three, every star will appear upon the plate that could be seen by even large telescopes. The star images will all be round and clean, but any planet that may have been in the field will have moved during the exposure, and its image will be a streak instead of a dot, and the length and direction of the streak will show how the planet was moving. During the year forty discoveries were reported. Of these two proved to be identical and four others turned out to be old ones; of the remaining 35, 22 have been "numbered," and 13 are awaiting further observation—or were on January 1, when the numbered list stood at 372.

### Navigation of the Columbia Improved.

The United States government has built at the mouth of the Columbia river the longest jetty ever constructed. The Columbia is by far the largest river west of the Rockies, being considerably over 1,000 miles in length and for 100 miles from its mouth navigable for the largest ocean vessels. At its mouth, too, is a splendid harbor, capable of sheltering in safety the largest vessels afloat. It is the only safe harbor between San Francisco, 600 miles to the south, and the Straits of Juan de Fuca, 200 miles to the north. However, prior to 1885, the harbor was of little use, because of the shifting sands that formed a bar first to one side and then to the other, and all the way from Cape Disappointment on the north to Point Adams on the south. Engineers who were applied to for a solution of the problem advised the building of a jetty from Point Adams out into the ocean for four or five miles; this would close up the channel from the south, when the current of the Columbia would wear a deep waterway to the ocean. This is just what has happened, for the largest vessels now sail through and anchor in the harbor, within cable length of the shore. The jetty is over four miles long, fifteen feet wide at the top, and built up to high water mark. Over 6,000 piles were driven; the lava blocks that form the filling were quarried near Portland.

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Teachers are well aware how powerfully the pen of John Fiske has been wielded in his special field of American history. He is not a mere narrator of facts, but he brings his philosophical faculty and training to bear upon them, so that in the light in which he presents them they acquire a new meaning. *His War of Independence* (Riverside Literature series) is called a sketch, and it is such compared with the larger accounts of that struggle that have been written. In it he traces causes and effect, answering the questions that a youth beginning United States history would be likely to ask, and observes the law of historical perspective. Many interesting things are omitted, so that the points of greater importance may receive their due share of attention. Although he gives an account of battles, the author devotes more space to tracing the changes in sentiment and opinion that finally resulted in the formation of the republic. The volume has maps, an index and a biographical sketch. It is a good book for supplementary historical reading in school. (Houghton, Mifflin & Co., Boston.)

*Mathematics for Common Schools*, by John H. Walsh, associate superintendent of public instruction, Brooklyn, N. Y. is a one-book arithmetic in three parts. Part I., *An Elementary Arithmetic*, contains portions of arithmetic needed by all pupils of the common schools—addition, subtraction, multiplication, and division of whole numbers; simple fractions, and the most commonly used denominations of compound numbers. Part II., *An Intermediate Arithmetic* (for pupils of fifth and sixth years), gives a sufficiently full treatment of common and decimal fractions, and of compound numbers, and takes up the simpler and more practical parts of percentage and interest. It has also easy algebraic equations of one unknown quantity. Part III., *A Higher Arithmetic*, completes the ordinary grammar school course in this subject and contains in addition a chapter on algebraic equations and one on elementary constructive geometry, with applications. The special features of the work are its division in the arithmetical portion into half-yearly chapters, instead of the ordinary arrangement of topics; the omission, as far as possible, of rules and definitions; the great number and variety of the examples; the use of the equation in the solution of arithmetical problems, especially those in percentage and interest, and the introduction of the elements of algebra and geometry. Besides

there are systematic drills in the fundamental operations of arithmetic in order that the pupil may be trained to make computations with rapidity and ease. This course in arithmetic thoroughly pursued, will certainly give the pupil a very substantial foundation for any branch of business he may wish to pursue. (D. C. Heath & Co., Boston. The first two books are 40 cents each and the third book 75 cents.)

Henry Wood, the author of several well-known books, has prepared another work on *The Political Economy of Natural Law*. It is a revised edition of a volume by the author issued in 1887 and its purpose is to outline a political economy which is practical and natural rather than theoretical and artificial, being a study of inherent laws and principles. Among the subjects considered are the law of co-operation, the law of competition, combinations of capital, combinations of labor, profit-sharing, socialism, economic legislation, can capital and labor be harmonized? the distribution of wealth, the centralization of business, booms and panics, money and coinage, tariffs and protection, industrial education, etc., etc. Where there are strong differences of opinion, as in the case of protection and free trade, the author usually manages to avoid both extremes. This, together with the idealism and optimism of the book, give it a peculiar value; besides, the style is entertaining, which helps to lend an interest to a usually dry subject. (Lee & Shepard, Boston. \$1.25.)

The preparation of the *Algebra for Beginners*, by W. F. Bradbury and G. C. Emery, was prompted by the discussions engaged in, and now going on with increasing interest, as to the placing of certain studies in the grammar school grades, that have been heretofore for the most part confined to the high school course. It seems now to be quite generally conceded that the study of algebra should be begun in the grammar schools; and this work is put forth to meet the call for a text-book so graded for beginners as to answer the requirements of the higher classes in these schools. In the *Algebra for Beginners*, the subject is presented somewhat differently than in the ordinary text-books; the equation is given greater prominence, and, with its reduction and problems, is placed at the beginning,—experience having proved that the principles of algebra are in this way more readily taught, and the interest of young pupils more quickly awakened. Few rules or definitions are given, and the inductive method has been followed. It is believed that the arrangement and treatment of the subjects are such as will interest the pupil, and help promote the object of school work by teaching him to think for himself. (Thompson, Brown & Co., Boston. 60 cents.)

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The death of Andrew J. Graham, senior member of the firm of Andrew J. Graham & Co., known among shorthand writers all over the English-speaking world, occurred recently at New York. The business will be continued at 744 Broadway under the firm name, Mr. Graham's interest remaining.

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The American Book Co. have published in pamphlet form "The Educational Value of Geography in the Common Schools," a paper read before the New York society of pedagogy, Feb. 28, 1894, by Thomas F. Harrison, ex-assistant superintendent of public schools of New York city and author of Harper's School Geography.

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